

Title (en)

MASS ANALYZER WITH MASS FILTER AND ION DETECTION ARRANGEMENT

Title (de)

MASSENANALYSATOR MIT MASSENFILTER UND IONENDETEKTORVORRICHTUNG.

Title (fr)

ANALYSEUR DE MASSE A FILTRE DE MASSE AMELIORE ET ENSEMBLE DE DETECTION DES IONS

Publication

**EP 1597750 A3 20051221 (EN)**

Application

**EP 04714589 A 20040225**

Priority

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Abstract (en)

[origin: US2004164241A1] An improved mass analyzer is set forth. In accordance with one embodiment, the mass analyzer employs a unique mass filter design that comprises an ion selection chamber in which ions are selected for detection based on their mass-to-charge ratio ( $m/Q$ ) by subjecting them to a non-rotating, oscillating electric field that, ignoring any fringing effects, oscillates principally in a single coordinate plane (i.e., the y-z plane). The ions may be injected into the ion selection chamber at a significant angle with respect to the inlet of the chamber and in the single coordinate plane to raise the  $m/Q$  resolution to the desired level. In accordance with a further embodiment of the mass analyzer, an ion detection surface is arranged at the outlet of the ion selection chamber so that ions falling within a predetermined exit angle range are detected to the general exclusion of ions having other exit angles.

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